

**Annual European Congress of Rheumatology
(EULAR 2018)**

Amsterdam, The Netherlands, 13-16 June 2018

**ZOLEDRONIC ACID SHOWS NO EFFECT ON KNEE PAIN OR BONE MARROW
LESIONS IN KNEE OSTEOARTHRITIS AFTER TWO YEARS**

Some symptomatic benefit was seen in patients with milder disease

Amsterdam, The Netherlands, 13 June 2018: The results of a study presented today at the Annual European Congress of Rheumatology (EULAR 2018) show that a one-yearly infusion of zoledronic acid (ZA) did not significantly reduce knee pain or bone marrow lesion (BML) size overall in knee osteoarthritis patients over two years. However, it may have symptomatic benefit in milder disease.¹

Osteoarthritis is a common condition that makes a person's joints stiff and painful, particularly in the morning. One of the causes is thinning of the cartilage within the joints, which allows the bones to rub against each other. Joint swelling and pain are frequent symptoms. It is the most common of all the different types of arthritis, and typically becomes more common as people get older.

"Osteoarthritis currently affects over 40 million Europeans and has a significant societal impact on sufferers and economic burden on health systems, this is only set to escalate in a rapidly ageing population," said Professor Thomas Dörner, Chairperson of the Abstract Selection Committee, EULAR. "There are very limited effective treatment options for the disease and bone marrow lesions remain an important therapeutic target."

Promising results from a pilot study previously conducted in 59 adults showed a single infusion of zoledronic acid reduced knee pain and BML size in knee osteoarthritis patients over six months.² The results presented today were from a multicentre, randomised, double-blinded, placebo-controlled trial that was designed to assess whether these improvements could be reproduced in a larger cohort over two years.

"It is disappointing that our results have not replicated the positive findings of the initial pilot study," said Professor Graeme Jones, Menzies Institute for Medical Research (study author). "However, there may be a role for zoledronic acid to relieve symptoms in patients with mild osteoarthritis."

Results showed that after 24 months, there were no significant changes in knee pain (WOMAC* pain score: -37.5 vs -11.7, $p=0.205$; VAS[†] pain score: -11.5 vs -16.8, $p=0.17$), WOMAC* function score (-134.9 vs -159.2, $p=0.65$), or knee BML size (-33.5mm² vs -

* Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain score (0-500), function score (0-1700).

† Visual Analogue Scale (VAS) pain score (0-100).

11.7mm², p=0.68) between the zoledronic acid group and placebo group respectively. However, pre-specified analyses consistently showed that ZA was more effective than placebo in patients without radiographic osteoarthritis (joint space narrowing (JSN) Grade 0) on changes in WOMAC pain (-88.3 vs -42.6, p=0.21), VAS pain (-21.8 vs -8.3, p=0.11), WOMAC function (-296.9 vs -78.5, p=0.06) and BML size (-67.4 vs 98.2, p=0.14). Adverse events were more frequent in the ZA group, primarily flu-like symptoms and musculoskeletal pain and stiffness.¹

The study was a multicentre, randomised, double-blinded, placebo-controlled trial over two years. There were 223 patients enrolled in the study who were 50 years or older and who had significant knee pain[‡] and MRI-detected knee BML. Severe knee osteoarthritis patients were excluded. The mean age of participants was 62 and 52% were female. The baseline mean WOMAC* scores for pain and function were 200/500 and 657/1700 respectively. The mean VAS[†] pain score was 51/100 and the median BML size was 489.6mm². Patients were randomized to receive either ZA or placebo once-yearly.¹

Abstract number: OP0016

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NOTES TO EDITORS

For further information on this study, or to request an interview with the study lead, please do not hesitate to contact the EULAR Press Office:

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About Rheumatic and Musculoskeletal Diseases

Rheumatic and musculoskeletal diseases (RMDs) are a diverse group of diseases that commonly affect the joints but can affect any organ of the body. There are more than 200 different RMDs, affecting both children and adults. They are usually caused by problems of the immune system, inflammation, infections or gradual deterioration of joints, muscle and bones. Many of these diseases are long term and worsen over time. They are typically painful and limit function. In severe cases, RMDs can result in significant disability, having a major impact on both quality of life and life expectancy.³

About 'Don't Delay, Connect Today!'

'Don't Delay, Connect Today!' is a EULAR initiative that unites the voices of its three pillars, patient (PARE) organisations, scientific member societies and health professional associations - as well as its international network - with the goal of highlighting the importance of early diagnosis and access to treatment. In the European Union alone, over 120 million people are currently living with a rheumatic disease (RMD), with many cases undetected.⁴ The

[‡] Defined as VAS (visual analogue scale) score ≥ 40 mm

'Don't Delay, Connect Today!' campaign aims to highlight that early diagnosis of RMDs and access to treatment can prevent further damage, and also reduce the burden on individual life and society as a whole.

About EULAR

The European League against Rheumatism (EULAR) is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with RMDs. EULAR aims to reduce the burden of RMDs on individuals and society and to improve the treatment, prevention and rehabilitation of RMDs. To this end, EULAR fosters excellence in education and research in the field of rheumatology. It promotes the translation of research advances into daily care and fights for the recognition of the needs of people with RMDs by the EU institutions through advocacy action.

To find out more about the activities of EULAR, visit: www.eular.org.

References

- ¹ Cai G, Aitken D, Laslett L, *et al*. A multicentre randomised controlled trial of zoledronic acid for osteoarthritis of the knee with bone marrow lesions. EULAR 2018; Amsterdam: Abstract OP0016.
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- ³ van der Heijde D, *et al*. Common language description of the term rheumatic and musculoskeletal diseases (RMDs) for use in communication with the lay public, healthcare providers and other stakeholders endorsed by the European League Against Rheumatism (EULAR) and the American College of Rheumatology (ACR). *Annals of the Rheumatic Diseases*. 2018;doi:10.1136/annrheumdis-2017-212565. [Epub ahead of print].
- ⁴ EULAR. 10 things you should know about rheumatic diseases fact sheet. Available at: <https://www.eular.org/myUploadData/files/10%20things%20on%20RD.pdf> [Last accessed April 2018].